CLAIMS (29493)

What is claimed is:

1. A hybrid speech encoder, comprising:

(a) a linear prediction, pitch and, voicing analyzer;

(b) a parametric encoder coupled to said analyzer; and

(c) a waveform encoder coupled to said analyzer;

(d) wherein said waveform encoder includes a zero-phase equalization filter.

2. The encoder of claim 1, wherein:

(a) said zero-phase equalization filter has coefficients determined by said analyzer.

3. A hybrid speech decoder, comprising:

(a) a linear prediction synthesizer;

(b) a parametric encoder coupled to said analyzer; and

(c) a waveform decoder coupled to said synthesizer;

(c) wherein said waveform decoder decodes zero-phase equalized weakly-voiced

frames time-synchronized with parametric decoder decoded strongly-voiced frames.

4. A speech encoder, comprising:

(a) a linear prediction, pitch and, voicing analyzer; and

(b) a waveform encoder coupled to said analyzer;

(c) wherein said waveform encoder includes a zero-phase equalization filter.